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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/518,545	02/08/2006	Ugenio Ferreira Da Silva Neto	DASI3002/FJD	9542

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EXAMINER	
WRIGHT, BRYAN F	

ART UNIT	PAPER NUMBER
2431	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/518,545	DA SILVA NETO, UGENIO FERREIRA	
	Examiner	Art Unit	
	BRYAN WRIGHT	2431	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *27 February 2009*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *12-22* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *12-22* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 2/27/2009 has been entered. Claim 12 is amended. Claims 12-22 are pending.

Claim Objections

1. Claim 12 is objected to because of the following informalities: The Examiner contends there is insufficient antecedent basis for applicant's claim limitation element of "**a control unit**". Applicant previously recites "**a remote control unit**" in line 3. Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

2. Claims 12 -15 and 17- 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gillen (US Patent Publication No. 2003/0208290) in view of Crater et al. (US Patent No. 5,805,442) and further in view of Galasso (US Patent No. 6,598,165).

3. As to claim 12, Gillen teaches a method for providing protection from unauthorized access to a field device (i.e., microcontroller) in process automation technology (i.e., ... teaches a microcontroller whose control program is protected from being read out [par. 12]),

whereby the set parameters of the function block (i.e., Gillen teachings of a control program could be consider to one of ordinary skill in the art as a function block [par. 28]) and the field device determine the functionality of the field device and allow the execution of complicated control procedures while

interacting with other field devices connected to the data bus (e.g., Fieldbus [par. 27]) (i.e., ...teaches a control program for controlling (e.g., allow) execution of microcontroller [par. 28]),

the method comprising the steps of:

performing an authorization examination (i.e., self-monitoring) in the case of accessing the parameters of the function block (e.g., control program) or the field device over the data bus (e.g., field bus connection [par. 27]) (i.e., ... teaches the control program stored in the field device performs self-monitoring operation thereby allowing the enabling and disabling of device features (e.g., accessing the parameters) being monitored [par. 28; par. 29)];

and permitting a change (i.e., activating basic function) in the parameters of the function block (e.g., control program) or the field device (i.e., microcontroller) or a replacement of the function block by the control unit over the data bus (e.g., field bus connection [par. 27]) only in the case when the authorization is available (i.e., ...teaches an authorization examination [par. 33] consisting of an identifier Ki of the software protection device 26.sub.Vi is interrogated by the control unit [par. 34] .... further teaches If the value X2 transmitted by the software protection device 26.sub.Vi to the control unit 16 does not correspond to the value X1, then only certain basic functionalities are activated [par. 38]).

Gillen does not expressly teach the claim limitation elements:

whereby the field device is connected over a data bus with a remote control unit,

the field device comprises at least one function block with defined communication interfaces.

However, these features are well known in the art and would have been an obvious modification of the system disclosed by Gillen as introduced by Crater. Crater discloses:

whereby the field device is connected over a data bus with a remote control unit (to provide data bus connection means to a remote control unit [abstract]),

the field device comprises at least one function block (e.g., communication module with defined communication interfaces (to provide a field device communication means such that communication is facilitated [abstract]).

Therefore, given the teachings of Crater, a person having ordinary skill in the art at the time of the invention would have recognized the desirability and advantage of modifying Gillen by employing the well known feature of field device function block architecture as disclose above by Crater, for which field device access authorization will be enhanced [abstract].

The combination of Gillen and Crater does not teach:

storing in the field device or function block a security program.

However, these features are well known in the art and would have been an obvious modification of the system disclosed by the combination of Gillen and Crater as introduced by Galasso. Galasso discloses:

storing in the field device or function block a security program (to provide the capability to store a security program Galasso provides security firmware for which prevents the modifying of content base on proper authorization [col. 1, lines 50-57]).

Therefore, given the teachings of Galasso, a person having ordinary skill in the art at the time of the invention would have recognized the desirability and advantage of modifying the combination of Gillen and Crater by employing the well known features of storing a security programs in a field device disclose above by Galasso, for which field device access authorization will be enhanced [col. 1, lines 50-57].

4. As to claims 13 and 14 the system disclosed by the combination of Gillen and Crater shows substantial features of the claimed invention (discussed in the paragraph above), it fails to disclose:

A method where: the security program is part of a function block (claim 13).

A method where: the security program is part of firmware stored in the field device (i.e., microprocessor) (claim 14).

However, these features are well known in the art and would have been an obvious modification of the system disclosed by the combination of Gillen and Crater as introduced by Galasso. Galasso discloses:

A method where: the security program is part of a function block (claim 13) (to include security protection as part of a firmware stored on a field device [fig. 1]).

A method where: the security program is part of firmware stored in the field device (i.e., microprocessor) (claim 14) (to store security firmware in field devices [col. 1, lines 50-57]).

Therefore, given the teachings of Galasso, a person having ordinary skill in the art at the time of the invention would have recognized the desirability and advantage of modifying the combination of Gillen and Crater by employing the well known features of storing security programs in a field device disclosed above by Galasso, for which field device access authorization will be enhanced [col. 1, lines 50-57].

5. As to claim 15, Gillen teaches a method where the security program includes a security key (i.e., identifier), which is stored in the field device during configuration of the field device (i.e., microcontroller) [par. 36].

6. As to claim 17, Gillen teaches a method where the security key is created during installation of the field device [par. 7].

7. As to claim 18, Gillen teaches a method where the security key (i.e., identifier) is provided by the field device [par. 39]. 9. As to claim 19, Gillen teaches a method where: the security key (i.e., identifier) is regularly renewed [par. 38].

8. As to claim 20, teaches a method where: the security key (i.e., identifier) is renewed hourly [par. 38].

9. As to claim 21, Gillen teaches a method where: the security key (i.e., ...identifier) is stored only in the field device [par. 36].

10. As to claim 22, Gillen teaches a method where: the field devices (e.g., EEPROM) are sensors, actuators, controllers, PLCs or gateways [par. 25].

11. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Gillen and Crater in view of Galasso, as applied to claim 12 above, further in view of Moyer (US Patent No. 7,266,848 and Moyer hereinafter).

12. As to claim 16 the system disclosed by Galasso shows substantial features of the claimed invention (discussed in the paragraph above), it fails to disclose:

A method where: the security key is an at least 128-bit code.

However, these features are well known in the art and would have been an obvious modification of the system disclosed by the combination of Gillen and Crater in view of Galasso as introduced by Moyer. Moyer discloses:

A method where: the security key is an at least 128-bit code (to provide a variable length security key capability [col. 3, lines 23-26]).

Therefore, given the teachings of Moyer, a person having ordinary skill in the art at the time of the invention would have recognized the desirability and advantage of modifying the combination of Gillen and Crater in view of Galasso by employing the well known features of variable length security key above by Moyer, for which field device access authorization will be enhanced [col. 3, lines 23-26].

Prior Art Made of Record

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

a. Kinney et al. (US Patent Publication No. 2003/0093460).

Response to Arguments

Applicant's arguments with respect to claims 12-22 have been considered but are moot in view of the new ground(s) of rejection. The Examiner's position is that Crater expressly teaches function block architecture within a field device.

With regards to applicant's arguments that Gillen is deficient in teaching "**a plurality of field devices is connected via a data bus**" on page 5, and all subsequent arguments directed toward the alleged deficiency, the Examiner contends such subject matter is not claimed in claims12-22 presented on 2/27/2009 and therefore the argument will not be considered. Examiner points out applicant's claim limitation 12 reads "**connected over a data bus**". Also, Examiner respectfully submits the teachings of Crater, figures 1 and 2, teaches such a bus architecture that of which applicant's argues as present in applicant remarks (2/27/2009).

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to BRYAN WRIGHT whose telephone number is (571)270-3826. The examiner can normally be reached on 8:30 am - 5:30 pm Monday -Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Korzuch can be reached on (571) 272-7589. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/BRYAN WRIGHT/
Examiner, Art Unit 2431

/William R. Korzuch/
Supervisory Patent Examiner, Art Unit 2431